



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

Autic  
split  
204  
216

**D3066-1**  
**Job Sheet 175676**



Part No: D3066-1

Job Qty: 200 ea

Part Name: Spacer



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 4/10/18

Job Tracking No:

Due Date: 7/5/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV B IPP: C 02.11.01 Incorporated D3066-1 IPP KJ/RF IPP Rev:B Now M6061-T6 06-06-23 JLM

Ship Via:

### Bill of Materials

### Job Routing

| Op No | Operation          | Qty     | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off    |
|-------|--------------------|---------|------------|----------|-----------|---------|-----------------------|-----------|-------------|
|       |                    |         |            |          | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time |             |
| 90    | Start up Operation | 200 Ea  |            | 7/4/18   | 0.00      | 0.00    | Start Up Waterjet     |           | SA 18/06/18 |
| 100   | Waterjet           | 200 pcs |            | 7/4/18   | 0.00      | 7.11    | Waterjet1 DEBR C/L    |           | SA 18/06/18 |
| 120   | QC                 | 200 pcs |            | 7/4/18   | 0.00      | 0.00    | QC8                   |           | 38          |
| 130   | HandFinish         | 200 pcs |            | 7/5/18   | 0.00      | 3.07    | HandFinish1           |           | SA 18-06-19 |
| 140   | QC                 | 200 pcs |            | 7/5/18   | 0.00      | 0.00    | QC7-2                 |           | CPC         |
| 150   | Packaging          | 200 pcs |            | 7/5/18   | 0.00      | 0.00    | Packaging3            |           | DAG CPC     |
| 160   | QC21-SA            | 200 Ea  |            | 7/5/18   | 0.00      | 0.00    | QC21                  |           | 21 18/06/18 |

Part Op 100 - 1-Cut as per Dwg D3066

Descriptions: 150 - \*\*\* STOCK IN STEP CELL\*\*\*

### Job BOM

| Part / Item  | Component Name     | Quantity              | Operation             | Container |
|--------------|--------------------|-----------------------|-----------------------|-----------|
| M6061T6S.080 | 6061-T6 .080 Sheet | 18.9000 sf (.0945 ea) | 90-Start up Operation |           |

### Job Allocations

| Operation             | Component Part | Required | Inventory | Allocated |
|-----------------------|----------------|----------|-----------|-----------|
| 90-Start up Operation | M6061T6S.080   | 19       | 188       | 0         |

### Part Specifications

| Spec No | Description | Target/Tolerance               | Limits           | Type | Special Comments |
|---------|-------------|--------------------------------|------------------|------|------------------|
| 1       | Spacer      | 0.128inches + 0.005<br>- 0.000 | 0.133<br>0.128   |      |                  |
| 2       | Spacer      | 0.708inches ± 0.010            | 0.718<br>0.698   |      |                  |
| 3       | Spacer      | 0.354inches ± 0.010            | 0.364<br>0.344   |      |                  |
| 4       | Spacer      | 0.354inches ± 0.010            | 0.364<br>0.344   |      |                  |
| 5       | Spacer      | 2.250inches ± 0.005            | 2.255<br>2.245   |      |                  |
| 6       | Spacer      | 16.450inches ± 0.010           | 16.460<br>16.440 |      |                  |
| 7       | Spacer      | 0.080inches ± 0.010            | 0.090            |      |                  |

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------------------|-------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|-------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|---------------------------------------------|--|--|--|----------------------------------------|----------------------------------------|--|--|--|---------------------------------------|-----------------------------------|--|--|--|-----------------------------------|---------------------------------------|--|--|--|---------------------------------------------|-------------------------------------------|--|--|--|-------------------------------------------|----------------------------------|--|--|--|------------------------------|----------------------------------------------|--|--|--|-------------------------------------|----------------------------------------------|--|--|--|-------------------------------------------|------------------------------------------------|--|--|--|----------------------------------------|-----------------------------------|--|--|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube <input type="checkbox"/></td> <td style="border: none;">Cross tube <input type="checkbox"/></td> <td style="border: none;">Water Jet <input type="checkbox"/></td> <td style="border: none;">Engineering <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Machining <input type="checkbox"/></td> <td style="border: none;">Small Fab <input type="checkbox"/></td> <td style="border: none;">Prod. Eng. Coord. <input type="checkbox"/></td> <td style="border: none;">Quality <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Thermoforming <input type="checkbox"/></td> <td style="border: none;">Finishing <input type="checkbox"/></td> <td style="border: none;">Rec/Store/Packaging <input type="checkbox"/></td> <td style="border: none;">Other <input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Large Fab <input type="checkbox"/></td> <td style="border: none;">Composite <input type="checkbox"/></td> <td style="border: none;">Supplier <input type="checkbox"/></td> <td></td> </tr> </table> |                                      |                                                                                                                                    |                   | Skid-tube <input type="checkbox"/> | Cross tube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/>   | Small Fab <input type="checkbox"/>  | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Skid-tube <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Cross tube <input type="checkbox"/>                                                                                                                                                | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Engineering <input type="checkbox"/> |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Machining <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Quality <input type="checkbox"/>     |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Thermoforming <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Other <input type="checkbox"/>       |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Large Fab <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Step #: _____                                                                                                                                                                      | QTY Effective : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                      | MRB (QSI042) Approval                                                                                                              |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| <div style="position: relative;"> <div style="position: absolute; top: 10px; left: 10px; font-size: 8px;">           Dart Aerospace Ltd.<br/>           1270 Aardeen Street<br/>           Hawkesbury, ON K6A 1K7<br/>           CANADA<br/>           TEL.: 1 813 632-5200<br/>           Email: sales@dartaero.com<br/>           www.dartaerospace.com         </div> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%);"> <div style="text-align: center;"> <br/> <b>Container No: S077435</b><br/> <b>Part: D3066 - 1</b><br/> <b>Job No: 175676</b><br/> <b>Serial No/Batch: S077435</b><br/>           Revision: _____<br/>           Inspector: _____<br/>           Exp Date: 06/03/2018<br/>           Instructions: _____         </div> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      | Completed By<br><br><br><br><br>Lead hand / Supervisor<br>Approval Verification<br><br><br><br><br>QC / QA Coordinator<br>Approval |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| <table style="width:100%; border: none;"> <tr> <td style="width:20%;"><b>Root Cause</b></td> <td style="width:20%;"></td> <td style="width:20%;"></td> <td style="width:20%;"></td> <td style="width:20%;"></td> </tr> <tr> <td style="border: none;">Environment <input type="checkbox"/></td> <td style="border: none;">No Re-verf <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Design <input type="checkbox"/></td> <td style="border: none;">Operator <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Doc/Data <input type="checkbox"/></td> <td style="border: none;">Offset/Sett <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Equip/Tooling <input type="checkbox"/></td> <td style="border: none;">Supplier <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Handling/Pre <input type="checkbox"/></td> <td style="border: none;">Training <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Material <input type="checkbox"/></td> <td style="border: none;">Use for Test <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Internal Transport <input type="checkbox"/></td> <td style="border: none;">Poor Information <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Tribal Knowledge <input type="checkbox"/></td> <td style="border: none;">Rushing <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">LOA <input type="checkbox"/></td> <td style="border: none;">Product Improvement <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Substation <input type="checkbox"/></td> <td style="border: none;">Process Improvement <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Past Expiry Date <input type="checkbox"/></td> <td style="border: none;">Manufacturing Process <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Misidentified <input type="checkbox"/></td> <td style="border: none;">Past Due <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> </table> |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    | <b>Root Cause</b> |                                    |                                     |                                    |                                      | Environment <input type="checkbox"/> | No Re-verf <input type="checkbox"/> |                                            |                                  |                                        | Design <input type="checkbox"/>    | Operator <input type="checkbox"/>            |                                |                                    |                                    | Doc/Data <input type="checkbox"/> | Offset/Sett <input type="checkbox"/>        |  |  |  | Equip/Tooling <input type="checkbox"/> | Supplier <input type="checkbox"/>      |  |  |  | Handling/Pre <input type="checkbox"/> | Training <input type="checkbox"/> |  |  |  | Material <input type="checkbox"/> | Use for Test <input type="checkbox"/> |  |  |  | Internal Transport <input type="checkbox"/> | Poor Information <input type="checkbox"/> |  |  |  | Tribal Knowledge <input type="checkbox"/> | Rushing <input type="checkbox"/> |  |  |  | LOA <input type="checkbox"/> | Product Improvement <input type="checkbox"/> |  |  |  | Substation <input type="checkbox"/> | Process Improvement <input type="checkbox"/> |  |  |  | Past Expiry Date <input type="checkbox"/> | Manufacturing Process <input type="checkbox"/> |  |  |  | Misidentified <input type="checkbox"/> | Past Due <input type="checkbox"/> |  |  |  |
| <b>Root Cause</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Environment <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No Re-verf <input type="checkbox"/>                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Design <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Operator <input type="checkbox"/>                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Doc/Data <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Offset/Sett <input type="checkbox"/>                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Equip/Tooling <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Supplier <input type="checkbox"/>                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Handling/Pre <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Training <input type="checkbox"/>                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Material <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Use for Test <input type="checkbox"/>                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Internal Transport <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Poor Information <input type="checkbox"/>                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Tribal Knowledge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Rushing <input type="checkbox"/>                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| LOA <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Product Improvement <input type="checkbox"/>                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Substation <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Process Improvement <input type="checkbox"/>                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Past Expiry Date <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Manufacturing Process <input type="checkbox"/>                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| Misidentified <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Past Due <input type="checkbox"/>                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
| <table style="width:100%; border: none;"> <tr> <td style="width:20%;"></td> <td style="width:20%;"></td> <td style="width:20%;"></td> <td style="width:20%;"></td> <td style="width:20%;"></td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">Crushing <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">Heat Treat <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">Wave/Twist in Tube <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">Marks/Chatter <input type="checkbox"/></td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">OTHER : _____</td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      | Crushing <input type="checkbox"/>   |                                            |                                  |                                        |                                    | Heat Treat <input type="checkbox"/>          |                                |                                    |                                    |                                   | Wave/Twist in Tube <input type="checkbox"/> |  |  |  |                                        | Marks/Chatter <input type="checkbox"/> |  |  |  |                                       | OTHER : _____                     |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Crushing <input type="checkbox"/>                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Heat Treat <input type="checkbox"/>                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Marks/Chatter <input type="checkbox"/>                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | OTHER : _____                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                                                                                    |                   |                                    |                                     |                                    |                                      |                                      |                                     |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |                                             |  |  |  |                                        |                                        |  |  |  |                                       |                                   |  |  |  |                                   |                                       |  |  |  |                                             |                                           |  |  |  |                                           |                                  |  |  |  |                              |                                              |  |  |  |                                     |                                              |  |  |  |                                           |                                                |  |  |  |                                        |                                   |  |  |  |

0.070

Plex 4/10/18 9:10 AM Dart.lajeunesse.marie



DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                      | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Step #:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | MRB (QSI042) Approval                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Completed By                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Lead hand / Supervisor<br>Approval Verification                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | QC / QA Coordinator<br>Approval                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Root Cause                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | FAULT CATEGORY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Environment <input type="checkbox"/><br>Design <input type="checkbox"/><br>Doc/Data <input type="checkbox"/><br>Equip/Tooling <input type="checkbox"/><br>Handling/Pre <input type="checkbox"/><br>Material <input type="checkbox"/><br>Internal Transport <input type="checkbox"/><br>Tribal Knowledge <input type="checkbox"/><br>LOA <input type="checkbox"/><br>Substation <input type="checkbox"/><br>Past Expiry Date <input type="checkbox"/><br>Misidentified <input type="checkbox"/> | No Re-verification <input type="checkbox"/><br>Operator <input type="checkbox"/><br>Offset/Setup <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Training <input type="checkbox"/><br>Use for Testing <input type="checkbox"/><br>Poor Information <input type="checkbox"/><br>Rushing <input type="checkbox"/><br>Product Improvement <input type="checkbox"/><br>Process Improvement <input type="checkbox"/><br>Manufacturing Process <input type="checkbox"/><br>Past Due <input type="checkbox"/> | Pressure/Forced <input type="checkbox"/><br>Bending <input type="checkbox"/><br>Centre Not Concentric <input type="checkbox"/><br>Cracks <input type="checkbox"/><br>Crimp/Kink/Ripple/Wave <input type="checkbox"/><br>Cuffs <input type="checkbox"/><br>Crushing <input type="checkbox"/><br>Heat Treat <input type="checkbox"/><br>Wave/Twist in Tube <input type="checkbox"/><br>Marks/Chatter <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Temperature/Cure <input type="checkbox"/><br>Set-up <input type="checkbox"/><br>BOM/Route <input type="checkbox"/><br>Broken/Damage/Defect <input type="checkbox"/><br>Inspection Incomplete/Unqualified <input type="checkbox"/><br>Contamination <input type="checkbox"/><br>Countersink <input type="checkbox"/><br>Cut Too Short <input type="checkbox"/><br>Instructions Incomplete/Unclear <input type="checkbox"/><br>Drill Holes <input type="checkbox"/> | Power Loss/Surge <input type="checkbox"/><br>Folio/Program <input type="checkbox"/><br>Grain <input type="checkbox"/><br>Weld <input type="checkbox"/><br>Wrong Stock Pulled <input type="checkbox"/><br>Out of Sequence <input type="checkbox"/><br>Off-set <input type="checkbox"/><br>Misabeled <input type="checkbox"/><br>Fit/Function <input type="checkbox"/><br>Misaligned/off center <input type="checkbox"/> | Positioned Wrong <input type="checkbox"/><br>Outside Dimensions <input type="checkbox"/><br>Over/Under tolerance <input type="checkbox"/><br>Part Incorrect <input type="checkbox"/><br>Part Lost/Missing <input type="checkbox"/><br>Part Moved <input type="checkbox"/><br>Drawing <input type="checkbox"/><br>Finish <input type="checkbox"/><br>Misread <input type="checkbox"/><br>Turning Sequence <input type="checkbox"/> |
| <div style="display: flex; justify-content: space-between;"> <span>OTHER : <input type="checkbox"/></span> </div>                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                   |